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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/580,989	03/29/2007	Yuichi Ono	082368-008100US	5847
20350 7590 03/23/2010 TOWNSEND AND TOWNSEND AND CREW, LLP TWO EMBARCADERO CENTER EIGHTH FLOOR SAN FRANCISCO, CA 94111-3834				
EXAMINER				
KOLKER, DANIEL E				
ART UNIT		PAPER NUMBER		
1649				
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/580,989

**Applicant(s)**

ONO ET AL

**Examiner**

DANIEL KOLKER

**Art Unit**

1649

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 06 January 2010.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1,9-12 and 27-31 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 27-31 is/are allowed.
- 6) ☒ Claim(s) 1,9-12 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/GS/US)  
Paper No(s)/Mail Date \_\_\_\_\_

- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

### **DETAILED ACTION**

1. The remarks and amendments filed 6 January 2010 have been entered. Claims 1, 9-12, and 27-31 are pending and under examination.

#### ***Withdrawn Rejections and Objections***

2. The following rejections and objections set forth in the previous office action have been withdrawn:

A. The rejection under 35 USC 112, second paragraph is withdrawn in light of the amendments which clarify the scope of patent protection sought.

B. The rejection under 35 USC 112, first paragraph is withdrawn in light of the amendments which delete the language the examiner had considered not to be fully described.

C. The rejection of claims 3-4 under 35 USC 102(b) over Millionig is moot as the claims are canceled.

#### ***Rejections Maintained***

##### ***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1 and 9 are rejected under 35 U.S.C. 102(b) as being anticipated by Smidt 2000 (Nature Neuroscience 3:337-341).

This rejection stands for the reasons previously made of record and explained in further detail below. Smidt teaches nucleic acids encoding Lmx1b, as well as methods of using same. The nucleic acid is a fragment of rat Lmx1b, and encodes an amino acid that is 100% identical to the amino acids encoded by mouse Lmx1b with GenBank accession number AF078166; see p. 337 second column first paragraph. The nucleic acid used by Smidt was 115 bp long, as encompassed by claims 1 and 9. Although the nucleic acids identified by SEQ ID NO: in independent claims 1 and 9 are not identical to those disclosed by Smidt, the claims do not require identity. The claims are considerably broader, in that they are drawn to methods of using nucleic acids that hybridize to SEQ ID NO:13, 15, or 17, or nucleic acids that hybridize to

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nucleic acids encoding SEQ ID NO:14, 16, or 18. The alignments shown below indicates that AF078166, i.e. the nucleic acid encoded by Smidt's cDNA, will hybridize to any of SEQ ID NO:13, 15, or 17. In the alignments, the top line is the nucleic acids sequence from the present application, and the bottom line is AF078166. Given the long stretches of identity across the entirety of the sequences, the nucleic acids from Smidt will inherently hybridize to SEQ ID NO:13, 15, and 17.

**SEQ ID NO:13 aligned with AF078166**

```

Qy      220 ATGTTGGACGGCCTGAAGATGGAGGAGAACTTCAAGTGCATTGAGACCTCGGCATCT 279
          |||||
Db      1  ATGTTGGACGGCATCAAGATGGAGGAGCAC-----GCCCTT-CGCCCCGGGC--CC 48

Qy      280 TTCTCCTCT-----TTGCTGGGCGAGCGGTGAGCCC---CAAGTCTGTCTGCGAGG 328
          |||||
Db      49 GCCACC-CTGGGGGTGCTGCTGGGCT---CCGACTGCCCGCATCCCG-CCGTCTGCGAGG 103

Qy      329 GCTGTCAAGCGGGTCATCTCGGACAGGTTTCTGCTGCGGCTCAACGACAGCTTCTGGCAGC 388
          |||||
Db      104 GCTGCCACGCGCCCATCTCCGACCGCTTCTGATGCGAGTCAACGAGTCGTCTTGGCAGC 163

Qy      389 AGCAATGCGTGCAGTGTGCCTCCTG-CAAAGAGCCCCTGAGACACACCTGCTTCTACCG 447
          |||||
Db      164 AGGAGTGTGTCAGTGCAGCGCATGTTCAGCAAG-CCCTCACCACGAGTGTCTTCCGG 222

Qy      448 GACAAGAAGCTCTACTGCAAGTACCACTACGAGAAACTGTTTGTGTCAAATGTGGGGGC 507
          |||||
Db      223 GATCGGAAACTGTACTGCAACAAGACTACCAACAGCTCTTCGCGGCAAGTGCAGCGGC 282

Qy      508 TGCTTCGAGGCCATTGCGCCCAATGAGTTTGTCATGCGTGCCCGAAGAGCGTATACCAC 567
          |||||
Db      283 TGCAATGGAGAAGATCGCGCTACCGAGTTCGTGTCATGCGGGCGCTGGAGTGTGTATACCAC 342

Qy      568 CTGAGCTGCTTCTGCTGCTGCGTCTGTGAGCGACAGCTGCAGAAGGGTGACGAGTTTGTG 627
          |||||
Db      343 TTGGCTGTTTCTGCTGTGTGTGTGTCAGAGGCACTGCGCAAGGGGACGAGTTCGTG 402

Qy      628 CTGAAGGAGGGCCAGCTGCTCTGCAAAGGGGACTATGAGAAAGAACGGGAGCTGCTGAGC 687
          |||||
Db      403 CTCAAGGAGGGCCAGCTGCTGTGCAAGGGTGACTATGAGAAGGAGAAAGACCTGCTCAGC 462

Qy      688 CTGGTGAGCCCTGCGGCCCTCAGACTCAGGCAAAAGCGATGATGAGGA--GAGCCTTTGCA 745
          |||||
Db      463 TCCGTGAGCCCGGACGAGTCTGACTCTGTGAAGAGTGAGGATGAAGATGGAGACATG--A 520

Qy      746 AGTCAGCCCATGGGGCAG-----GAAAAGGAGCATCAGAG--GACGGCAAGGACCAT 795
          |||||
Db      521 AGCCGG-CCAAGGGGAGGGCAGCCAGAGTAAAGGAGTGAGATGACGGGAAAGACCCG 579

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[illegible]

SEQ ID NO:15 aligned with AF078166

Qy	281	ATGCTGGACGGCCATAAGATGGAGGGAACCTTCCAAAGCGCATGCACACCTCGGCCCTCC	281
Db	1	ATGTTGGACGGCATCAAGATGGAGGAGCACGCCCTTCGCCCC---CGGGCCC---GCCACC	54
Qy	282	TTCTCCTCGCTGCTGGGCAGAGCGGTGAGCCC---CAAGTCTGTCTGCGAGGGCTGTCA	337
Db	55	CTGGGGTGTCTGCTGGGCT---CGCAGTGCCTGCATCCCG-CCGTCTGCGAGGGCTGCCA	110
Qy	338	GCGGGTCATCTTGGACAGGTTTCTGCTGCGGGCTCAACGACAGCTTCTGCGCATGACAGTG	397
Db	111	GCGGGCCATCTCCGACCGCTTCTGTATGCGAGTCAACGAGTCGTCTGCGACAGGAGTG	170
Qy	398	CGTGCAGTGCGCCCTCTG-CAAAGAGCCCTGGAGACCACCTGCTTCTACCGGGACAAGA	456
Db	171	TTTGCAGTGCCTGCGCATGTACAGAAAG-CCCTCACCACAGCTGCTACTTCCGGGATCGGA	229
Qy	457	AGCTGTACTGCAAGTATGACTACGAGAAGCTGTTTGGCTGTTAAATGTGGGGGCTGCTTCG	516
Db	230	AACGTACTGCAAAACAGACTACCAACAGCTCTTTCGCGGCAAGTGCACGGGCTGCATGG	289
Qy	517	AGGCCATCGCTCCCAATGAGTTTGTATTATGCGGGGCCAGAAAGAGTGTATACCACCTGAGCT	576
Db	290	AGAAGATCGCGCCTACCGAGTTCGTCTATGCGGGCGCTGGAGTGTGTGTACACTTGGGCT	349
Qy	577	GCTTCTGTCTGTGTCTGCGAGCGACAGCTTTCAGAAAGGTGATGAGTTTGTCTGAAGG	636
Db	350	GTTTCTGTCTGTGTGTGTCGAGAGGCAACTGCGCAAGGGGGACGAGTTCGTGCTCAAGG	409
Qy	637	AGGGGCAGCTGCTCTGCAAGGGGACTATGAGAAGGAGCGGGAGCTGCTCAGCCTGGTGA	696
Db	410	AGGGCCAGCTGCTGTGCAAGGGTGACTATGAGAAGGAGAAAGACCTGCTCAGCTCCGTGA	469
Qy	697	GCCAGCAGCCTCAGACTCAGGTAAGAGTGATGATGAAGAAAGTCTCTGCAAGTCAGCCC	756
Db	470	GCCCGGACGAGTCTGACTCTGTGAAGAGTGAGGATGAAGATGGAGACATGAAGCCGG-CC	528
Qy	757	ATGGGGCAGGG-----AAAGGAACCTGCTGAGGAAGGCAAGGACCATAAGCGCCCC	806
Db	529	AAGGGGCAGGGCAGCCAGAGTAAAGGCAGTGGAGATGACGGGAAGACCCGAGAAGGCC	588
Qy	807	AAACGTCCGAGAACCATCTTGACAACCTCAACAGAGGCGAGCATTCAGGCCCTCATTTGAA	866
Db	589	AAACGGCCCCGAACCATCTCTACCAACACAGCAGCGAAGAGCTTTCAGGCATCCCTTTGAG	648
Qy	867	GTATCTTCCAAGCCCTGACGGAAGGTGAGAGAGACTCTGGCTGCAGAGACAGGGCTGAGT	926
Db	649	GTCTCTTCCAAGCCCTGTGGAAGGTCCGAGAGACATTGGCAGCAGAGACAGGCCCTCAGC	708
Qy	927	GTCCTGTGCTCCAGGTGTGGTTCCAAAACAGAGAGCGAAGATGAAGAAGCTGGCCAGG	986

Db	709	GTGCGTGTGGTCCAGGCTCTGGTTTCAGAACCAAGAGCAAAAGATGAAGAAGCTGGCCCGG	768
Qy	987	CGACAGCAGCAGCAGCAGCAAGATCAGCAGAACCCAGAGGCTGAGCTCTGC---TCAG	1043
Db	769	AGACACCAGCAACAGCAG---GAGCAGCAGAACTCCCAGCGGTGGGCCAAGAGGTTCTG	825
Qy	1044	ACAAACGGTGGTGGGAGTGCTGGGATGGAAGGAATCATGAACCCCTACACGGCTCTGCC	1103
Db	826	TCAAGC-----CGC----ATGGAGGGCATGATGGCCTCTACACCGCGCTGCC	870
Qy	1104	ACCCACAGCAGC---TCCTGGCCATCGAGCAGAGTGCTAC---AGCTCAGATCCCTTC	1157
Db	871	CCTCCGACAGCAGATCGTGGCCATGGAGCAGAGCCCCACGGAAGCAGCGACCCCTTC	930
Qy	1158	CGACAGGGTCTCACCCACCCAGATGCCTGGAGACCACATGCACCTTATGGTGCCGAG	1217
Db	931	CAACAGGGCCTCAGCCGCCCAAATGCCAGGGAACGACT-----	970
Qy	1218	CCCCTTTTCATGACCTGGATAGCGAGCACCTCCCTCAGTAACCTGGGTGATTGTTTC	1277
Db	971	-CCATCTTCCACGATATTGTATAG---TGATACCTCCCTCACCAGGCTCAGCGACTGCTTC	1026
Qy	1278	CTAGCAACCTCAGAAGCTGGGC-CTCTGCAGTCCAGAGTGGGAACCCCATTTGACCATCT	1336
Db	1027	CTCGGCTCTTCCGACG-TGGGCTCCCTGCAGGCGCGCTGGGGAACCCCATTTGACCGGCT	1085
Qy	1337	GTACTCCATGCAGAATCTTACTTTCATCATCTTGA	1370
Db	1086	CTACTCCATGCAGAGCTCCTACTTTGCGCTCTGA	1119

Qy		1	TC---TGGCTTT-----TTCCACTTGGTGTGGT---GGT--TTGGGGGAT--TCATTCA	43
Db		1119	TCAGGAGGCCAAAGTAGGAGCTCTGCATGGAGTAGAGCCGGTCAATGGGGTTCCCCACGGC	1060
Qy		44	TTCCATTATTTCAGCATTCCACTGT--ATAGTCCAGAGGTGAGCAAG-GC-AAGGCTGGT--	97
Db		1059	CGCCTG---CAGGGAGCCCACGTCGGAAGAGCCGAGG-AAGCAGTCGCTGAGGCTGGTGA	1004
Qy		98	GGGTGGCTCTGTTATCCATCTCCT-----GTGTCCAAGC-----GACTGC-	137
Db		1003	GGGAGGTATCACATATCAATATCGTGGAAGATGGAGTCGTTCCTGGCATTGGGGCGGCG	944
Qy		138	-----TCCAGTT-----GTACCATGTTTCCAGT-----CACCAGGTGAGAGA	175
Db		943	TGAGGCCCTGTGGAAGGGGTCG--TGC TTC -GTAGGGGCTCTGCTCCATGGCCACGA	887
Qv		176	GACTCTG--GCTGCAGA---GACAGGGCTGAGT----GTC--CGTGTGCTCCAGGTGTG	223

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Db 886 ----TCTGCTGCTGCGGAGGGGCCAGCGCGGTGTAGGAGGCCATCATGCCCTCCATGCGGC 830

Qy 224 GTTCCAAAACAGAGAGCGAAG-----ATGAAGAAGCTGG--- 258

Db 829 TTGACAGAACCTCTTGCCCGAGCGCTGGGAGTTCTGCTGCTCTGCTGTTGCTGGTGTC 770

Qy 259 --CCAGGCGACAGCAGCAGCAGC-----AGCAAGATCAGCAGAACACC 299

Db 769 TCCGGGC--CAGCTTCTCATCTTTGCTCTTTGGTTCTGAAACAGACCTG--GACCACA 714

Qy 300 CAGAGGCTGAG-----CTCTG-----CTCAGA---CAAACGGTGGTGGGAG 337

Db 713 CGCAGCTGAGGCCTGCTCTGCTGCCAATGTCTCTCGACCTTCCGACAGGGCTTGGAG 654

Qy 338 -----TGCTGGGATGGAAGGA---ATCATGAA 361

Db 653 GAGACCTCAAAGGATGCCTTGAAAGCTCTTCGCTGCTGTGTGGTGAGGATGGTTCG-GGG 595

Qy 362 CC-----CCTACACGGCTC-TGCC---ACCCACAGC-----AGCT--CCTG 398

Db 594 CCGTTTGGGCCTTCTCGGGCTTTCCCGTCATCTCCACTGCCTTTACTCTGGCTGCCCTG 535

Qy 399 GCCAT---CGAGCAGAGTGTCTACAGC---TCAGATCCCTTCCGACAGGGTCTCACCCC 451

Db 534 CCCCTTGGCGGGCTTCATGTCTCCATCTTCATCCTCACTCTTC--ACAGAGTCAGACTCG 477

Qy 452 ACC-----CCAGATGC---CTGG-----AGAC--CACATG--CACCCTTATGGTGC--C 491

Db 476 TCCGGGCTCACGGAGCTGAGCAGGTCTTTCTCCTTCTCATAGTCACCCCTTGACACGACG 417

Qy 492 GAGCCCCCTTTCCATGACCTGGATAGCGACGACACCTCCCTCAGTAACCTGGGTGATGTT 551

Db 416 TGGCCC----TCCTTGAGCACGAACCTCGTC--CCCCTTGCGCAGTTGCGCT----- 373

Qy 552 TTCTAGCAACCTCAGAAGCTG---GGCCTCTG-----CAGTCCAGAG-----T 592

Db 372 ---CTCGCACACACAGCAGCAGAAACAGCCCAAGTGTACACACACTCCAGCGCCCGCAT 316

Qy 593 GGGAAACCCCATTGACCATCTGTACTCCATGCAGAAATCTTACTT---CAC----- 640

Db 315 GACGAACTCGGTAGGCGCGCATCTTCTCCATGCAGCCGTGCACCTTGGCCGGAAGAGCTG 256

Qy 641 -----ATCTTG-----AGCTTTC---CCCTAGAGTT---CTG----- 666

Db 255 TTGGTAGTCTTGGTTTGCACTACAGTTTCCGATCCCGGAAGTAGCAGCTGGTGGTGAGGCG 196

Qy 667 ---TGACTAGGCTCCCATATGGAACA-ACCATATTCTTTGAGGGGTC---ACTGGCTT 717

Db 195 TTGCTGACATGCCGCGCACTGCAAACTCTTCGTGCCAGGACGACTCGTTGACTCGCAT 136

Qy 718 TAGGA-----CAGGGAGGCCAGGGAAGAGGTGGGTT--GGGGAG-- 754

Db 135 CAGGAAGCGGTGCGGAGATGGGCCGCTGGCAGCCCTCGCAGACGGCGGGATGCGGGGAGTC 76

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Qy      755 GGAGTTTGTGTTG-----GGGATGCTGTTGTATAATGATATGGTGTAGCTCAGCATTT 806
      |||||  |  |      |||  ||  |  |  |  |  |  |  |||||  |  |
Db      75  GGAGCCCAGCAGCACCCCCAGGGTGGCGG--GCCCGGGGCGAAGGGCGTGCTCCTCCATC 18

Qy      807 CCAAAGACTGAATACAT 823
      |  |  |  ||||
Db      17 TTGATGCCGTCCAACAT 1

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Smidt performed the assays on tissue slices, which comprise cellular samples, including the ventral midbrain; see for example Figure 1. The reference therefore teaches every element of claim 1. Furthermore, Smidt teaches the step of contacting the cellular samples with antibodies that bind to Ptx3 (see Figure 2d), anticipating claim 9.

Applicant argued that the amendment to recite certain specific hybridization conditions is sufficient to overcome the rejection. The examiner respectfully disagrees and notes that the three alignments shown above indicate that the sequences will hybridize. Note in particular the multiple long stretches of sequence identity in the first two alignments (i.e. SEQ ID NO:13 and 15). The USPTO does not have the resources to test the specific hybridization kinetics and parameters recited in the present claim. Given the large degree of sequence identity, the property of hybridization to applicant's recited SEQ ID NOs appears to be inherent to the nucleic acid used by Smidt. Absent evidence to the contrary (for example in the form of a declaration which shows that the prior art nucleic acids do not hybridize under the recited conditions) the property is presumed to be inherent. The reference anticipates each of claims 1 and 9.

#### ***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later

invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1, 9-10, and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Smidt 2000 (Nature Neuroscience 3:337-341) in view of Holzsuh 2001 (Mechanisms of Development 101:237-243).

This rejection is maintained for the reasons previously made of record. The reasons why claims 1 and 9 are anticipated by Smidt are set forth above. Briefly, the reference teaches contacting a cellular sample with a nucleic acid that will hybridize to one or more of the nucleic acids listed in the claims to detect dopaminergic neurons, and also teaches detecting Ptx3 to confirm that a dopaminergic neuron is present. However Smidt does not teach detecting DAT as recited in claim 10 and 12.

Holzsuh teaches that DAT (dopamine transporter) is expressed in dopaminergic neurons, and that this marker can be used to distinguish truly dopaminergic cells from other catecholamine-containing cells. However Holzsuh does not teach the method of claims 1 or 9 or the product of claim 3.

It would have been obvious to one of ordinary skill in the art to modify the methods set forth by Smidt to include the steps taught by Holzsuh, thereby arriving at the invention recited in claims 10 and 12. Doing so would have been advantageous, Holzsuh teaches that DAT is particularly useful to identify dopaminergic neurons.

Applicant did not traverse the examiner's determination that the reference by Holzsuh renders obvious the specific limitations of claims 10 and 12. Rather applicant argued that the reference by Smidt does not teach the method recited in claim 9 or in part (a) of claim 12. The examiner respectfully disagrees, and notes that the reasons why Smidt teaches those particular limitations is set forth in the rejection under 35 USC 102(b) above.

### ***Rejections Necessitated by Amendment***

#### ***Claim Rejections - 35 USC § 103***

5. Claims 1, 9, and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Smidt 2000.

The reasons why claims 1 and 9 are anticipated by Smidt are set forth above. Not only does Smidt teach detection of nucleic acids that hybridize to SEQ ID NO:13, 15, and 17, the reference also teaches detection of Nurr1 in dopaminergic neurons; see for example Figure 5

and p. 338, second column, first complete paragraph. Therefore it would have been obvious to one of ordinary skill in the art to also detect Nurr1 as recited in claim 11. The motivation to do so would be to confirm that the detected neurons are in fact dopaminergic.

### ***Conclusion***

6. Claims 1 and 9-12 are rejected.
7. Claims 27-31 are allowed.
8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to DANIEL KOLKER whose telephone number is (571)272-3181. The examiner can normally be reached on Mon - Fri 8:30AM - 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jeffrey Stucker can be reached on (571) 272-0911. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Daniel E. Kolker/

Primary Examiner, Art Unit 1649

March 18, 2010